CAD for VLSI Design (EEA002)

Time / Location: Wednesday 18:30-21:20 (E1-114)

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Office Hours: Wednesday 18:00-18:30; other time by appointment only.

Teaching Assistant:

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Prerequisites: intro. to digital systems (required), data structures, intro. to VLSI (suggested)

Text Book: S. H. Gerez, "Algorithms for VLSI Design Automation", John Wiley & Sons, 1999.

Reference: indicated in each unit

Course Contents:

- Introduction to electronic design automation (6 hrs)
- Logic synthesis (6 hrs)
- Logic simulation (3 hrs)
- Physical design: (15 hrs) partitioning, floorplanning, placement, routing
- High-level power/current estimation (3 hrs)
- Behavioral modeling for mixed-signal circuits (3 hrs)
- Noise-aware physical design (3 hrs)
- Project presentation (6 hrs)

Grading:

Homework: 30% Final Project: 30% Final Exam: 40%

On-Line Resources: Lecture notes, homeworks / tests, sample solutions, grading information, and other course-related materials are available at <u>http://www.ee.ncu.edu.tw/~jimmy/courses/CAD08</u>.

Academic Honesty: Cheating is very uncivilized behavior and is to be avoided at all cost. Oral discussion about homeworks is not considered cheating. Copying someone else's homeworks / tests or part of a homework / test is cheating. If cheating is discovered, all students involved will receive no credit for the homework / test and possibly get an F grade for the course.